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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/785,150	02/24/2004	Xueying Huang	CL2074USNA	8161

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LEGAL PATENT RECORDS CENTER
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WILMINGTON, DE 19805

EXAMINER

ZIMMER, MARC S

ART UNIT	PAPER NUMBER
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1712

DATE MAILED: 04/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/785,150	Applicant(s) HUANG, XUEYING	
	Examiner Marc S. Zimmer	Art Unit 1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☒ Claim(s) 29 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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Claim Rejections - 35 USC § 112

Claims 1-27 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The original disclosure does not particularly exclude any one embodiment of the genus of compounds encompassed by the description of original claims 1 and 17 nor is there any indication that any one member of said genus is inferior in any way. Accordingly, the subject matter introduced by way of amendment is considered new matter.

Applicant is advised that, should the claims be amendment so as to place them back into their original form, the rejection made of record in the correspondence mailed November 10, 2004 will be reinstated.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 28 is rejected under 35 U.S.C. 103(a) as being unpatentable over
"Synthesis of Well-Defined, Polymer-Grafted Silica Particles by Aqueous ATRP"
published in *Langmuir* and authored by Patten et al. in *Langmuir*. The Examiner stated

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earlier that these claims were allowable because the reference had not expressly disclosed analogues of 3-(dimethylethoxysilyl)propyl-2-bromoisobutyrate nor was there any apparent motivation to replace this initiator with one that is structurally similar. However, the Examiner had failed to consider that, "it is prima facie obvious to substitute equivalents, motivated by the reasonable expectation that the respective species will behave in a comparable manner or give comparable results in comparable circumstances". *In re Ruff* 118 USPQ 343; *In re Jezel* 158 USPQ 99; "the express suggestion to substitute one equivalent for another need not be present to render the substitution obvious." *In re Font*, 213 USPQ 532.

In general, the non-patent-literature omits mention of chemically analogous compounds that may be used as equivalents replacing one or more aspects of their "invention" because, unlike in the patent literature, the objective is not to disclose as broadly as is possible all related embodiments. Rather, the non-patent literature, and the academic journals in particular, are generally used as a forum to disclose the answers to questions more relevant to matters of basic research where widespread protections of the technology are not being sought. The skilled artisan will appreciate that, in most instances, the components expressly disclosed in the preparation of a chemical system may be replaced with other structurally-related materials. In the present case, this would merely entail the recognition that one silylalkyl ester of 2-bromo-2-methylpropionate may be replaced by another (isobutyrate and 2-methylpropionate are different ways of naming the same organic residue). Further, the skilled artisan would not expect the replacement of the two non-

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hydrolyzable, silicon-bound methyl groups with ethoxy groups to yield a materially different product than that taught by the reference. Hence, the initiator molecule recited by claim 28 is obvious.

Claim 29 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Although it is known to modify the surfaces of biologically relevant products with a polyether to impede non-selective binding of bio-materials, the reference provides no suggestion whatsoever of extending their methodology to the production of these types of products nor do any of the references (1) to (8) mentioned early in the disclosure as providing other examples of surface-initiated polymerization.

This action has not been made final due to the recognition that claims 28 should have been rejected. Claim 18 would also be subject to rejection if the claims were amended back to their original form.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Marc S. Zimmer whose telephone number is 571-272-1096. The examiner can normally be reached on Monday-Friday 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 571-272-1302. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

April 5, 2005

Marc Zimmer

Marc Zimmer

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